

Work Order ID 127923

December-17-14 2:01:09 PM

127923

Page 1

Item ID: D4116-1KIV

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Panel W/Rotor Brake

Stop ***NS2***

Start Date: 12/17/14 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 12/17/14 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: MLS Date: 14-12-23 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4116	A

100 0.00

100

HandThermo

Memo

0.00

Hand Finishing Thermoforming

1-Cut Sheet to required Blank size



DAS
07
9-89

15/01/27
15/03/12

105 0.00

105

HandThermo

Dry Material

Memo

0.00

Hand Finishing Thermoforming

Dry Sheet as per QSI022 KYDEX

Temp: 150 deg. F

JAN 26 2015

Time IN: 5:00 PM

Time OUT: 6:00 AM

Per.....

XL



DAS
07
9-89

15/01/27

15/03/12

XL

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Work Order ID 127923

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Page 2

Item ID: D4116-1KIV

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Panel W/Rotor Brake

Stop ***NS2***

Start Date: 12/17/14 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 12/17/14 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110		0.00							07 9-09
110									
Thermoform	Memo	0.00				X1			
Thermoforming Machine	1-Machine Set-Up 2-Pre-heat Tool to required temp. 3-Thermoform as per Dwg and Folio #FTA086 using tool DT9204 Dwg Rev: <u>A</u> Folio Rev: <u>A</u> Visually inspect for proper formation and texture					X1			15/01/27 15/03/16
140		0.00							
140									
HandThermo	Memo	0.00				1			15/03/16
Hand Finishing Thermoforming	1-Trim to finished dimensions as per Dwg					1			
150	QC2- Inspect parts off machine FAI/FAIB	0.00							
150									
QC	Memo	0.00				1			15/03/16
Quality Control	Complete FAI document								

DQA:

Date: 15/05/05



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: 15/04/30

Work Order update only ☐

Work Order: 127923	DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS			
Part No. D4116-11K10		Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
NCR No. 15-4843		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
		Thermoforming ☒	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
		Large Fab ☐	Composite ☐	Supplier ☐	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	15-03-16	110	(1)	PART OVERHEATED	DAS 16 9-89	Scrap/destroy	15/03/16	DAS 38 9-89 MAR 16 2015	PD 15-03-16
Doc/Data				PL Magic Eye not seen correct informat.	Q62042 15/03/16	And Replace			
Equip/Tooling				Tooling		M B M124462 x1			
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process				PC Process/Fold					
Supplier				not able to control verlate in templates					
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General	
☐ Bending	☐ Bend	☐ Folio/Program
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain
☐ Cracks	☐ Broken/Damage/Defect	☐ Hardware
☐ Crimp/Kink/Ripple/Wave	☐ Burrs	☐ Inspection Incomplete/Unqualified
☐ Cuffs	☐ Contamination	☐ Instructions Incomplete/Unclear
☐ Crushing	☐ Countersink	☐ Misaligned/off center
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled
☐ Inspection Strip in Tube	☐ Drawing	☐ Misread
☐ Marks/Chatter	☐ Drill Holes	☐ Off-set
☐ Turning Sequence	☐ Finish	☐ Out of Calibration
☐ Wave/Twist in Tube	☐ Fit/Function	☐ Out of Sequence
		☐ Outside Dimensions
		☐ Over/Under tolerance
		☐ Part Incorrect
		☐ Part Lost/Missing
		☐ Part Moved
		☐ Positioned Wrong
		☐ Power Loss/Surge
		☐ Pressure/Forced
		☐ Set-up
		☒ Temperature/Cure
		☐ Weld
		☐ Wrong Stock Pulled
		☒ Other
		Tooling

Work Order ID 127923

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127923

Page 3

Item ID: D4116-1KIV

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Panel W/Rotor Brake

Start Date: 12/17/14 Start Qty: 1.00

1 (2)

Cust Item ID:

Required Date: 12/17/14 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC5- Inspect part completeness to step on W/O	0.00							
160									
QC	Memo	0.00				X/	X/		DAS 38 9-88
Quality Control									MAR 16 2015
170	Identify as per dwg & Stock Location: <u>Plg 16</u>	0.00							
170									
Packaging	Memo	0.00							
Packaging									DAS 06 9-88
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.00							
Quality Control									

D5.3.20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
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Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge	☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Picklist Print

December-17-14 2:01:08 PM

Page 1

Work Order ID: 127923

127923

Parent Item: D4116-1KIV

D4116-1KIV

Parent Item Name: Panel W/Rotor Brake

Start Date: 12/17/14

Required Date: 12/17/14

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev. A New Issue 10/11/30 DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MKYD6185S.080-P3-62015		Purchased		No		100	sf	2,757.830	12.412	1326			DAS 07 9-89
MKYD6185S 080-P3-62015													

Kydex Ivory (52"x96"-.080)

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LAIRD	1178.6633	
m129761	797.33	
m130671	381.3333	
therm	1960.5	
116576	6.5	
121755	160	
124462	1100	
m127758	347	
m128322	347	

15/01/07

20-38 PL.

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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DART AEROSPACE LTD		Work Order: 127923
Description: Panel w/ Rotor Brake		Part Number: D4116-1KIV/KGY
Inspection Dwg: D4116	Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than "	✓			
Shape Definition	✓			
Texture Retention	✓			
Material Imperfections such as bumps, cracks, voids, scratching	✓			

Measured by: JB

Date: 15/03/16

TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
30.5	Ref	30.625	✓		TH-05	
31.0 31.0	Ref	31.0	✓		TH-05	
0.20 0.20	Min	.051	✓		TH-DF	
3.5	Ref	4.75	✓		TH-05	
0.050	Min	.069	✓		DL-02	
1.0	Min	1.1	✓		DL-02	
0.020	Min	.040	✓		TH-DF	
0.6	+/-0.100 TYP	1.078	✓		DL-02	
17.25	Ref	17.190	✓		TH-05	
4.0	Ref	3.97	✓		DL-02	
0.63	Min 3 sides	1.095	✓		DL-02	
1.0	Top Min	1.108	✓		DL-02	
0.25 TYP	Min	.257	✓		DL-02	
0.75 TYP	Ref	.645	✓		DL-02	
1.6 TYP 1.5 TYP	+/-0.100	1.55	✓		DL-02	
0.25	Min	.395	✓		DL-02	
9.5	+/-0.100	9.52	✓		TH-05	
30.0	Ref	29.875	✓		TH-05	

Measured by: JB DAS

Date: 15/05/16

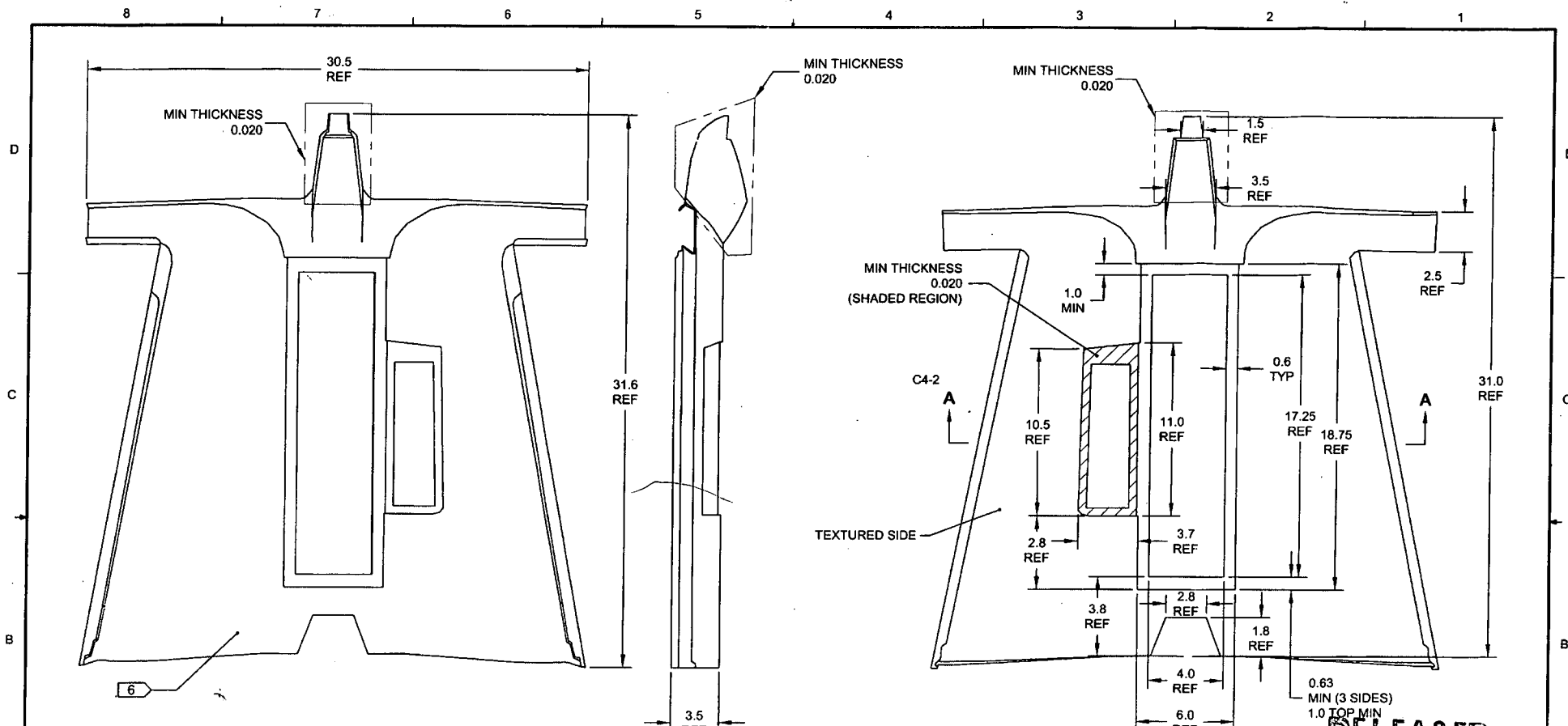
Audited by: JB 38
9-89

Date: MAR 16 2015

Preliminary Approval:

Date:

Rev	Date	Change	Revised by	Approved
A	11.01.21	New Issue	KJ	<u>JB</u> 11.03.18



SHOP COPY
 REFUSED
 UNCONTROLLED
 SURFACED
 WITH
 127923 MJS
 14-12-23

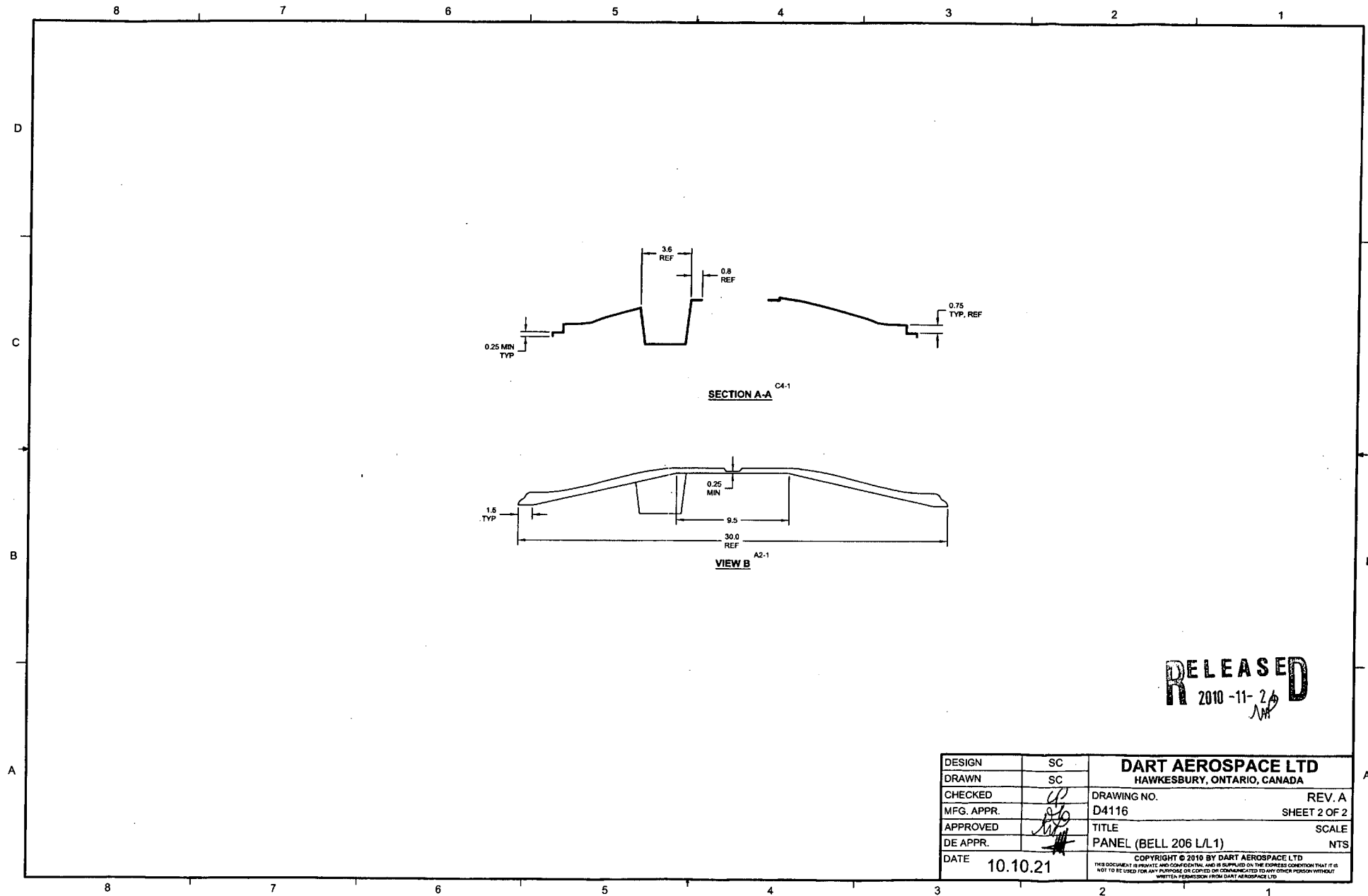
D4116-1 PANEL, WITH ROTOR BRAKE
 (BELL 206 L/L1)

NOTES:

- 1) MATERIAL: SEE TABLE
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: DART P/N (SEE TABLE) PER DART QSI 044 6.4
- 7) WEIGHT: 2.4 lbs
- 8) TOOLING: THERMOFORM PER MOLD DT9204 PER DART QSI 022. TRIM PER MOLD
- 9) MINIMUM THICKNESS: 0.050" UNLESS OTHERWISE NOTED

PART NUMBER	DESCRIPTION
D4116-1KIV	KYDEX 6185, 0.080 THICK, P3-VELOUR MATTE, IVORY #62015 (MKYD6185S.080-P3-62015)
D4116-1KGY	KYDEX 6185, 0.080 THICK, P3-VELOUR MATTE, STEEL GRAY #52068 (MKYD6185S.080-P3-52068)

REV.	DESCRIPTION	SC	DATE
A	NEW ISSUE	SC	10.10.21
DESIGN	SC	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SC		
CHECKED	SC	DRAWING NO.	REV. A
MFG. APPR.	SC	D4116	SHEET 1 OF 2
APPROVED	SC	TITLE	SCALE
DE APPR.	SC	PANEL (BELL 206 L/L1)	NTS
DATE	10.10.21	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



RELEASED
2010-11-26
JH

DESIGN	SC	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SC		
CHECKED	UP	DRAWING NO.	REV. A
MFG. APPR.	AP	D4116	SHEET 2 OF 2
APPROVED	AP	TITLE	SCALE
DE APPR.	AP	PANEL (BELL 206 L/L 1)	NTS
DATE	10.10.21	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	